

Work Order ID 160608

Tuesday, May 02, 2017 10:00:25 AM

160608

Page 1

Item ID: D4462-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Baffle

Start Date: 5/15/2017 Start Qty: 6.00

Required Date: 5/18/2017 Req'd Qty: 6.00

Reference: SCHEDULED/S

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date: MAY 02 2017 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4462	E

100

0.02

100

Waterjet

FLOW CNC Waterjet

Memo

1.26

Cut as per dwg

Prog rev: E

Dwg rev: E

(2)

05/17/2013

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Quality Control

Memo

0.06

(2)

05/17/2013

120

QC8- Inspect parts - second check

0.00

120

QC

Quality Control

Memo

0.12

2

DAS
38
9-89

JUN 16 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

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Page 2

Item ID: D4462-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Baffle

Start Date: 5/15/2017 Start Qty: 6.00

6

Cust Item ID:

Required Date: 5/18/2017 Req'd Qty: 6.00

6

Customer:

Reference: SCHEDULED/S

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Bend as per dwg

0.16

130

Brake NC

Memo

1.29

DAS
30
9-89

(2)

JUN 23 2017

Brake NC

FLANGE HOLES AS PER DWG

Form as per dwg****,ensure that tabs are bent the right direction****

140

QC6- All purchased or subcontracted products

0.00

140

QC

Memo

0.00

2

DAS
38
9-89

JUN 23 2017

Quality Control

150

Chemical Conversion Coat per QSI005 4.1

0.00

150

HandFinish

Memo

2.39

(x2)

J

2017/06/26

BEB.

Hand Finishing

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 160608

Tuesday, May 02, 2017 10:00:25 AM

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Page 3

Item ID: D4462-1

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N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Baffle

Start Date: 5/15/2017 Start Qty: 6.00

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Cust Item ID:

Required Date: 5/18/2017 Req'd Qty: 6.00

6

Customer:

Reference: SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC7-Inspect Chemical Conversion Coat	0.00				2			DAS 38 9-89
160									
QC	Memo	0.06							
Quality Control									JUN 26 2017
170	Identify as per dwg & Stock Location: _____	0.00				2			DAS 6 9-89
170									JUN 26 2017
Packaging	Memo	0.06							
Packaging	LOCATION: WA003								
180	QC21- Final Inspection - Work Order Release	0.00							
180									17/6/27
QC	Memo	0.60							
Quality Control									DAS 21 9-89

JUN 27 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Picklist Print

Tuesday, May 02, 2017 10:00:25 AM

Page 1

Work Order ID: 160608

160608

Parent Item: D4462-1

D4462-1

Parent Item Name: Baffle

Start Date: 5/15/2017

Required Date: 5/18/2017

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 11.11.22 NEW ISSUE DD VERF:EC IPP REV:B
13.10.28 DWG REV PD1 DD VERF:JLM IPP REV:C 14.06.13
AS PER DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.063		Purchased		No		100	sf	208.9460	2.2	13.89474			

M6061T6S 063

6061-T6 .063 Sheet

05/17/13

Location

Loc Qty

Loc Code

MAT021

208.946

M134604

57.77

M134830

2.456

M136251

31.9

M136790

9.9

M136896

9.2

M137041

47.72

M137175

50

7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

DART AEROSPACE LTD		Work Order:	160608
Description: Baffle		Part Number:	D4462-1
Inspection Dwg: D4462 Rev: E		Page 1 of 1	

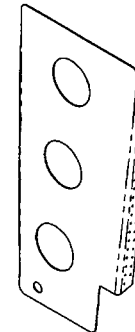
INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.128	+0.005/-0.001	Ø.128	1		V.D-02	
Ø0.768	+0.010/-0.001	Ø.767	1		Tap	
Ø3.50	+0.012/-0.001	Ø 3.499	1			
0.660	+/-0.010	.660	1			
0.38	+/-0.030	.38	1			
0.750	+/-0.010	.749	1			
1.74	+/-0.030	1.74	1			
5.77	+/-0.030	5.77	1			
6.50	+/-0.030	6.50	1			
12.44	+/-0.030	12.44	1			
14.16	+/-0.030	14.16	1			
3.75	+/-0.030	3.75	1			
4.12	+/-0.030	4.12	1			
4.28	+/-0.030	4.28	1			
4.65	+/-0.030	4.65	1			
11.21	+/-0.030	11.21	1			
18.29	+/-0.030	18.29	1			
19.81	+/-0.030	19.81	1			
22.38	+/-0.030	22.38	1			
23.55	+/-0.030	23.55	1			
5.05	+/-0.030	5.05	1			
9.31	+/-0.030	9.31	1			
12.54	+/-0.030	12.54	1			

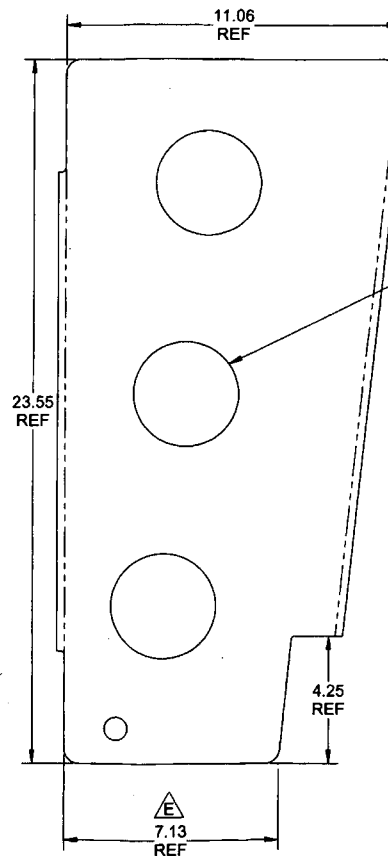
Measured by:	DL	Checked by:	DAS 38	QC Inspector:	
Date:	17/05/13	Date:	9-89 JUN 16 2017	Date:	

Engineering Approval: (If necessary)		Date:	
--	--	--------------	--

Rev	Date	Change	Revised by	Approved
A	12.02.01	New Issue	KJ	
B	12.05.15	Dimensions updated per Dwg Rev B	KJ	
C	13.05.08	Dwg Rev updated	KJ	
D	15.01.14	Dimensions updated per Dwg Rev C	KJ	
E	15.01.20	Dimensions updated per Dwg Rev E	KJ	



1.66 TYP



FLANGE IN SAME DIRECTION
AS BENDS USING DT9776
3 PL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER
NO. 160608A
MAY 02 2017

RELEASED

2015 JAN 15

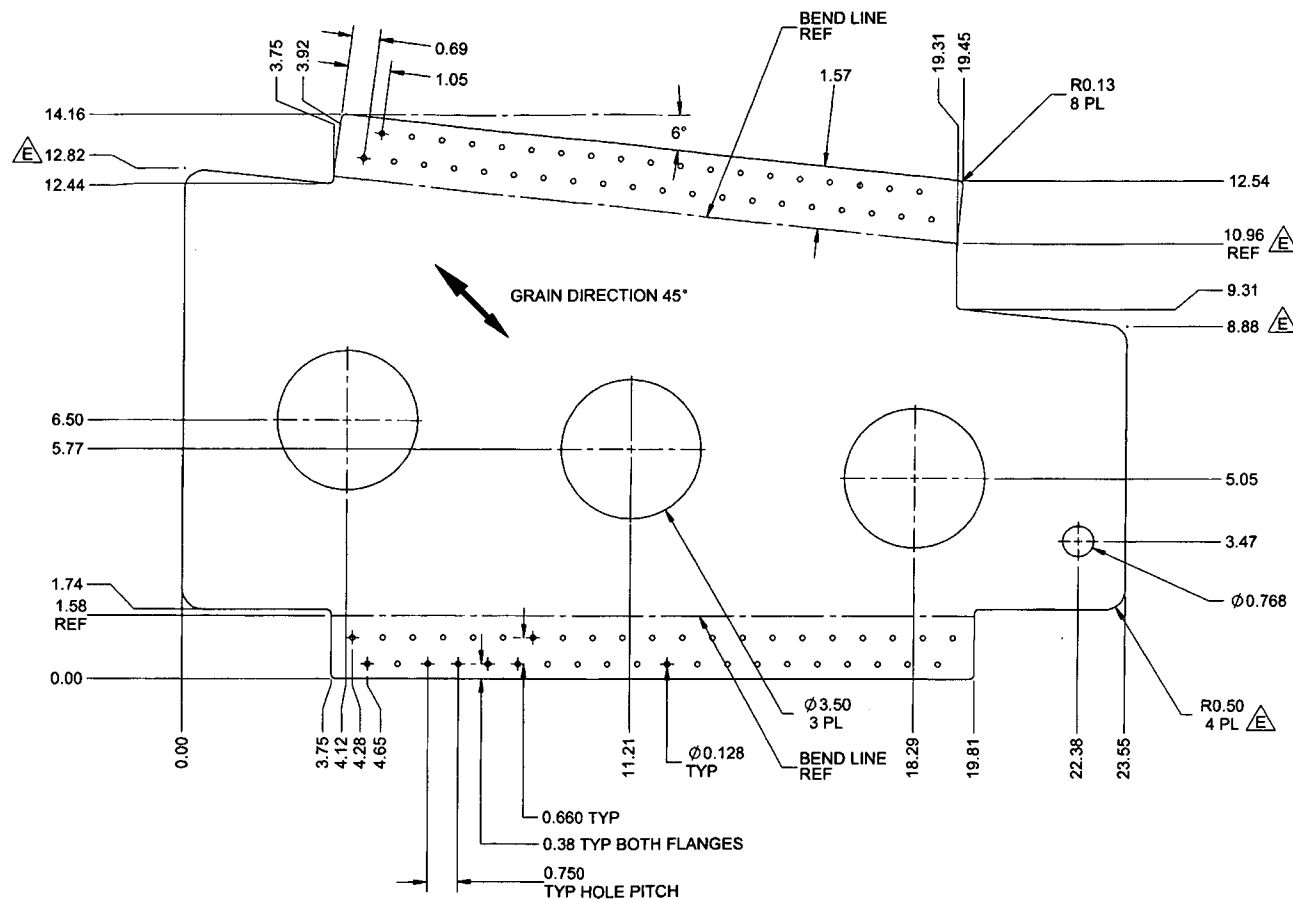
ECW 14-666

D4462-1 BAFFLE

- NOTES:
- 1) MATERIAL: MADE FROM D4462-1F
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 1.54 lbs

E	ADDED R0.50 TO D4462-1/3 FLAT PATTERNS. DIMENSIONAL CHANGES TO D4462-3 DUE TO INTERFERENCE. ADD "REF" ON REDUNDANT DIMS	AP	15.01.06
D	ADDED MISSING DIM 22.38 (B3-2), THRU HOLE RELOCATED TO CORRECT MISALIGNMENT	AP	14.11.14
C	REDESIGNED BAFFLES TO ALLOW RIVETING TO SIDE WALLS. ADDED NOTE 8 ON SHEET 2 & 4 (ZN A8-6) REF NCR 13-3100	ML	14.05.13
B	D4462-1 HEIGHT WAS 24.21, IS NOW 24.06 (ZN C5-1). D4462-3 HEIGHT WAS 24.25, IS NOW 24.11 (ZN C5-3). TAB LENGTH WAS 0.70, IS NOW 0.80 (ZN D1-2/-4). ADDED NOTE 8 (ZN A8-1/-3).	DC	11.12.05
A	NEW ISSUE	DC	11.10.19
REV.	DESCRIPTION	BY	DATE
DESIGN	ML	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. E
MFG. APPR.	DD	D4462	SHEET 1 OF 4
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	BAFFLE	NTS
DATE	15.01.06	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

APPROVED



D4462-1F FLAT PATTERN

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET, 0.063 THICK
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC M6061T6S.063
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.54 lbs
- 8) ALL NON DIMENSIONED FEATURES PER DRAWING FILE "D4462-1F-E.DXF"

APPROVED

DESIGN	ML	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. E
MFG. APPR.	DD	D4462	SHEET 2 OF 4
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	BAFFLE	NTS
DATE	15.01.06	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

RELEASED

2015 JAN 15